Department of the Navy IUID AIS Strategy



CIO - DASN April 2010



What Is the Strategy?

An objective process for evaluating, prioritizing and converting systems, based on Functional Area Managers' portfolio enterprise value of IUID and SIM.



Why Do We Need This Strategy?

The AIS Strategy....

- ✓ Provides relief from immediate IRB deadlines
- ✓Provides IRB with in-depth, objective evaluation of IUID project plan, requirements, and resource plan
- ✓ Creates ability to say "No" to the IRB that IUID for a particular AIS is not relevant, or not worthwhile from DON's perspective
- ✓ Establishes real prioritization of AIS efforts from an enterprise view and within financial environment
- ✓ Engages DASN A&LM as advocate to acquire resources for IUID enablement



IUID Allows DON AISs to Connect DON to the World



The IUID's enterprise value is essential for DON business processes.



What AISs Does The Strategy Apply to?

Includes asset management systems:

- Maintenance systems
- Supply systems
- Configuration management and modeling systems
- Readiness systems
- Facilities, site-specific (general base use or project-specific)
- Local weapon/mission support related equipment, lab equipment
- Standalones inventory or item handling of any kind or size
- Specialized inventory systems ordnance, test tools (TE/STE), local GFE
- GFE and Property In the Hands of Contractors (PIPC) tracking
- Research equipment
- Computer hardware assets including circuit boards
- Disposal and carcass tracking
- Contracts handling physical items, including spares, OEM repair, major mods
- Warranty information systems
- Financial accounting systems handling physical items
- Systems using serial numbers
- IT search engine, display and decision systems if individual items are part of data dictionary or data drawn from other source/interface systems
- Classified and confidential systems (Registry requirements different, but AIS compliance the same)
- Tracking technical drawings requirements, or program management documentation with IUID reqt
- Interfacing with WAWF, DLA, or NAVSUP
- Procurement, contract-writing, receipt and acceptance systems

Bottom Line

If an AIS handles items or item data, it is subject to the process.



What Doesn't the Strategy Apply to?

Don't include systems that handle only:

- Categories of items (NSNs)
- services (IT development, O&M, consulting, support, research)
- real property
- people and human resources
- policy
- correspondence
- workflow if workflow doesn't apply to items
- software configuration
- engineering drawings repository, if no engineering requirements are tracked (i.e., if IUID requirement is not tracked)
- intelligence, space, sensing, climate, tactics

Depending on business rules:

 Transportation systems (if your RFID system handles IUID, or provides "referential integrity," include it) > TUID

(AP)UID

RPUID

CAC

Bottom Line

If an AIS does not handle items or item data, it is not subject to the process.



What Will the Strategy Apply

to?

Includes asset management systems:

- ERPs (handling maintenance, logistics, finance, supply)
- COTS
- Legacy systems being updated with O&MN dollars
- Warehouse and inventory management systems
- Boundary and feeder systems
- Non-Program of Record systems (non-PE line systems)
- Congressional interest systems
- Classified and confidential systems (Registry requirements differ, but AIS compliance the same)

Why Convert Legacy Systems?

Why do we need to evaluate AISs that are sunsetting?

- 1) **Schedule slip** there could be schedule slip for the ERPs (Navy ERP and GCSS-MC)
- 2) **Easy workarounds** other solutions could be available, e.g. a utility linking UII with primary key is available
- 3) **Related systems** enabling a particular sunsetting system may be essential to enabling another surviving or ERP bolt-on system handling IUID in a timely, cost-efficient manner
- 4) **Backup for IRB** DON needs to be able to tell the IRB we did an objective evaluation of the system, by an independent perspective that includes the overall impact on the organization (DON).
- 5) **Clean data for ERP migration** data could still be valuable to the DON overall, directly in a sunsetting system or in other uses (such as ERP data priming). This value would depend on the business functions of the system, and the manner of sunsetting/data migration.
- 6) **Future value** the system may be in a "gray area" that does not warrant IUID at this time, but could become worthwhile down the road as other systems and architectures change depending on inherent value of IUID in this system, interfacing systems, and data integrity. These systems are identified and included in the DON AIS process for monitoring, even if the current decision is not to enable with IUID.



AIS PM Deliverables

- DON IUID Compliance Checklist
- IUID Interface Diagram
- Prioritization Worksheet
- IUID Implementation Project Plan
- Preferred Funding Source

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Process?

- Identify all AISs that might need IUID
- Evaluate need for IUID for each AIS
- Prioritize
- Plan IUID development work
- Review by DASN and DON CIO
- Determine funding source
- Enter completion date on DON Integrated Schedule

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Process?

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- → DASN/SYSCOM creates list of possible AISs
- PM completes DON Checklist and
 interface diagram, DASN reviews

 PM completes Prioritization Worksheet
- PM drafts PMP with requirements, cost, schedule, and preferred funding source
- DASN and CIO review Prioritization and Plan, and approve resourcing approach
- → PM and DASN negotiate funding with resource sponsor/OPNAV

DASN adds to Integrated Schedule, and submits to IRB as needed with

Bottom Linstrategy based on standard SoftWare Development Line Cycle planning.

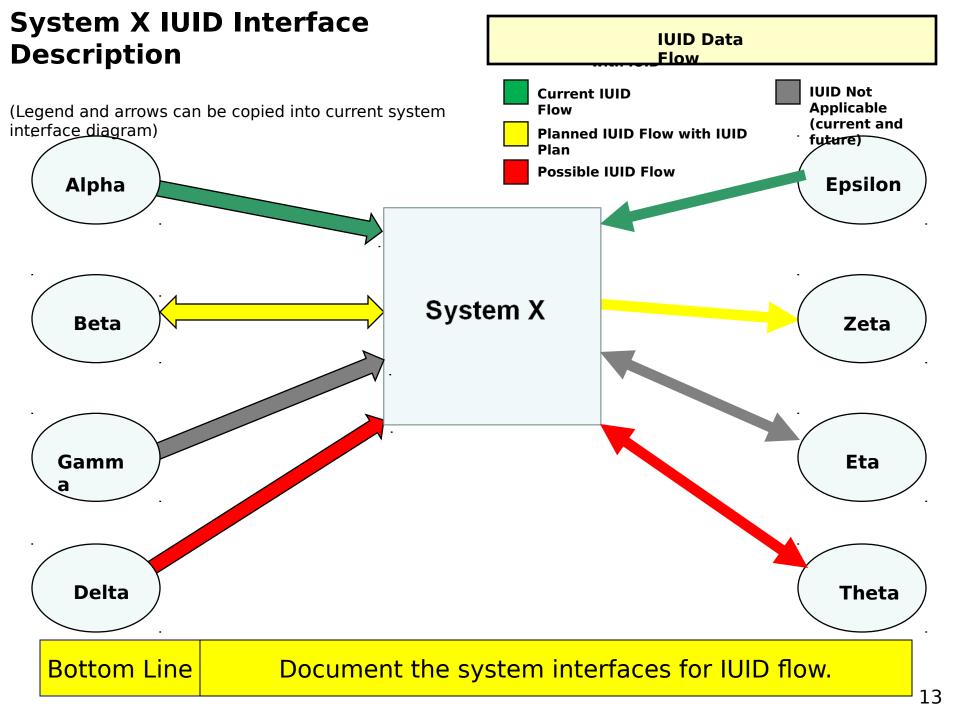


DON IUID Checklist

0	A	В	С	D										
2		IUID Compliance Checklist for W	SLM/MS	SSM IRB										
3	Conduct Prog	was identified as potentially requiring compliance with IUID policy based on the system's description was identified as potentially requiring compliance with IUID policy based on the system's description and Management (A3.2.8); Manage Receipt and Acceptance (A3.1.2.4); Manage Property and Materiel (A4.2.8)												
4		Dispose or Return Property and Materiel (A4.5); Perform Asset Accountability (A4.6)												
5		: Answer all questions and provide explanation in the comments block.												
6	1	Question A determines if the IUID policy applies to the system. Provide a yes or no answer in the space provided. See "Co	omments" colu	umn for further instructions based on the answer provided.										
7	2	f IUID applies after answering A, then proceed with questions 1 through 7.												
8	3	Questions 1 - 7 (highlighted blue) are system functionality questions. Provide a yes or no response in the space provided. A "yes" answer means that the system performs or supports that function and the sub-questions must be answered. A "no" answer means that the system does not perform or support that function so skip to the next blue question.												
9	4	The sub-questions (e.g., 1.a, 1.a, 1) are intended to determine if the system meets IUID requirements as defined in policy provides the required capability in full. A "no" answer indicates the system does not provide the capability, but should, base address the system's approach to compliance with the respective question in the system's compliance plan. If the capability has checklist is not intended to set policy for IUID. System responses to individual questions should be based solely on the	d on its syste y does not ap	m description or functionality mapping to the prescribed BEA activities. If "no", please ply to the system, answer "N/A" and briefly explain why it is not applicable. PLEASE NOTE:										
10	5	The yes/no cells are conditionally formatted. They will change color based on the answer provided. See the legend for more information.												
11	Question #	Question	Yes/No	Comments (explain Yes/No answers)										
12		Does the system manage, send/receive, display, or store data associated with materiel that fits one or more of the following IUID criteria (per DODI 8320.04, paragraph 5.3)?		If "no", then the IUID policy does not apply to this system										
13		thems for which the Government's unit acquisition cost is \$5000 or more		If "yes", then the IUID policy applies to this system. Continue with the										
14	A	 Items for which the Government's unit acquisition cost is less than \$5000 and is identified by the requiring activity as DOD serially managed, mission essential, or controlled inventory 		checklist to determine if the IUID condition is applicable. Note: For the remainder of this checklist, the term "IUID" and "Unique Item Identifier" is used as defined in DoDI 8320.04.										
15		 Items for which the Government's acquisition cost is less than \$5000 and the requiring activity determines that permanent identification is required 		Note: See DODI 8320.04, paragraph 5.3										
16		Regardless of value, (a) any DOD serially managed subassembly, component, or part embedded within an item, and; (b) the parent item that contains the embedded subassembly, component or part												
17	1	Does the system perform property accountability functions, and/or provide visibility of property (i.e. access, query, or display property information) to include final disposition of materiel at the end of the life cycle?		If no, go to question 2										
18	1.a	Can the system capture and/or store a Unique Item Identifier (UII)?		Provide explanation. If applicable, include how the system captures IUID data.										
19	1.a.1	If yes, does this system use this capability in the current business process for all required IUID items.		Provide explanation										
20	1.b	Can the system update accountable records with the UII or electronically associate an accountable record to a UII?		Provide explanation										
21	1.b.1	If yes, does this system use this capability in the current business process for all required IUID items.		Provide explanation										
22	1.c	Can the system capture Ulls using automated information technology (AIT)?		Provide explanation										
23	1.c.1	If yes, does this system use this capability in the current business process for all required IUID items.		Provide explanation										
24	1.d	For systems that update accountable records for all required items that meet the IUID criteria and are at the end of their life cycle, can the system provide the data elements required to document final disposition in the IUID Registry?		Provide explanation. If applicable, include how IUID data is provided to the IUID Registry.										

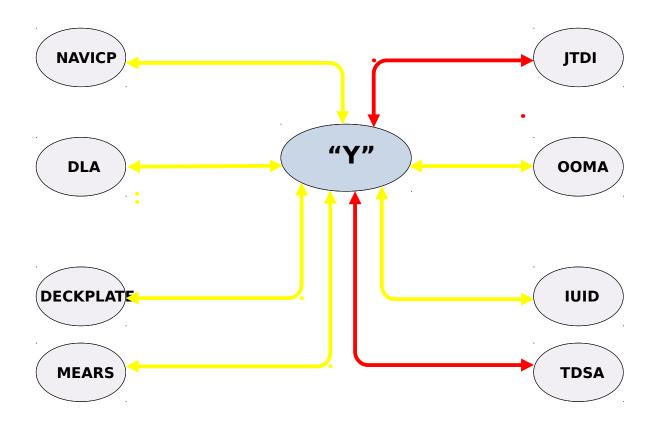
Bottom Line

Eight questions evaluate possible need for IUID.



Sample "Y" IUID Interface



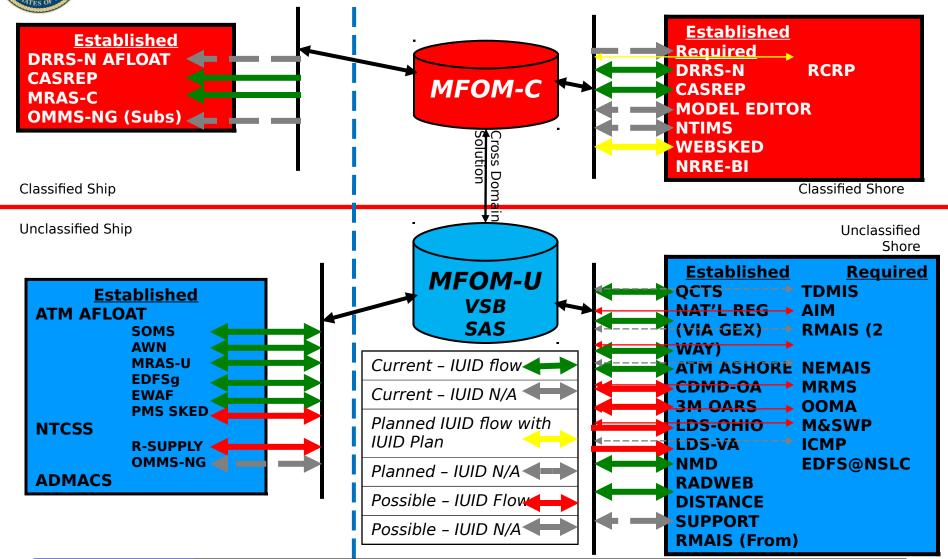


Bottom Line

As simple as possible.



MFOM Interfaces



Bottom Line ow all interfaces; 36 shown on this example. Non-IUID in gray.



Prioritization Worksheet

		Progra m of Record	ERP Interfac e	SYSCOM -wide	DON wide	Serially managin g	item/DO N boundar y	Authorita -tive Data Source	TOTAL POINTS	When do you estimate your system can be IUID-compliant (Fiscal Year and Quarter)	IUID cost estimate
OT S	31	1	2	1	1	0	0	0	5	3QFY11	\$77,488

- Yes = 1, No = 0
- Program of Record = Program Element line
 - supports Log IT Excomm portfolio management initiative
- ERP interface = Navy-ERP or GCSS-MC (Yes = 2 points)
- SYSCOM-wide = handles data for more than one program or unit
- DON-wide = handles data for more than one SYSCOM or command
- Item/DON boundary = source of the UII data
 - interaction with the actual items (using scanners to read the 2D Matrix on an item); or
 - handling items coming into or out of DON in some other manner, such as from WAWF, DLA, other services, vendors
 - most of these systems will need AIT input as part of their IUID enablement
- Authoritative Data Source
 - A system that serves as the verifiable, accurate and most trusted data source for a specific data element or a group of data elements. Authoritative Data Sources are generally those systems that are authorized to create, update, or otherwise alter the content (data) of a data element.

Bottom Line

Establish the enterprise view of IUID value in each AIS.



IUID Project Plan

- Standard System Development Life Cycle project plan – requirements, effort hours, phase completion dates, final operations date, cost and schedule
- Plan must accomplish all identified sub-questions on IUID Compliance Checklist

Goal is implementation by end of 2013

What Technical Support Can I Get?

- "Easy Ways to Implement IUID"
 - Unused data fields
 - VIN number field
 - Use as 'shadow primary key' if necessary
 - > Trace current primary key through tables, operations, screens, reports, interfaces
 - Expand current serial item management
- Drop-in modules
 - > AIT handscanner input
 - Validating IUID/UII mark compliance
 - Creating Ulls and IUIDs
 - Registry interface to extract/verify pedigree data, and to update at trigger events
- Keyboard wedge for current primary key/UII crosswalk table
- Checklist for minimum business process requirements (see Resources section of this brief)

Bottom Line

Don't reinvent the wheel – DON has free tool suite to assist going through the journey.

DON Integrated Schedule

- Enter completion date on DON Integrated Schedule
 - DASN adds to Integrated AIS Schedule, submits to IRB and DON CIO, with supporting documents

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Bottom Line

AISs will become enabled in a phased approach, based on value to DON.

IS Strategy Current Status

- Accepted by Weapons Systems Lifecycle Management)/Materiel Supply and Services (WSLM/MSS) Investment Review Board (IRB) as valid Service plan
- Defined interface sequencing responsibilities for DON systems to IRB
 - requires interface update only when second half of interface plans compliance
 - added interface question to BTA Checklist to create DON version
- Approximately 120-200 systems anticipated to be assessed; 56 identified to date
 - IRB has placed IUID Condition on 21 systems
 - 6 systems submitted to IRB with planned compliance date, or request to remove condition; working with FMO to accelerate review process
 - 10 systems being evaluated, including the two ERPs;
 - \sim 50 additional systems will be interfacing with Navy ERP or GCSS-MC, and must be upgraded to handle these ERP's IUID capabilities apart from policy compliance
- Echelon II CIO outreach by DASN (A&LM) under way
 - NAVASEA, NAVSUP completed

Bottom Line

SYSCOM support required to enable AISs to achieve IUID value proposition throughout the enterprise.



What's Ahead?

- Detailed template for PM's AIS IUID Plan under development
- IUID Rule for DON Enterprise Architecture is under review by DON CIO's EA team; will apply to all new software acquisition, and current legacy AIS annual review process
- DADMS/DITPR-DON update with required IUID qualification, review and compliance fields
- New IRB FY2010 Guidance expected this summer, with tough deadlines for IUID compliance
- OSD expanding DoD-wide business process re-engineering which depends on successful IUID implementation; SIM requirements signal expected to increase



More Information

DON IUID AIS Strategy document:

https://acquisition.navy.mil/rda/home/acquisition_one_so urce/ item_unique_identification_iuid

- DON IUID AIS Implementation Strategy v1.1
- DON IUID AIS <u>Compliance Checklist v1.0</u>
- DON-owned tools, including APIs:

http://www.qcts.org/

DON IUID/SIM lead, in DASN (A&LM) Logistics:

(703) 614-8000

DASN IUID/SIM Support:

(703) 614- 3944

(703) 697-4063

Bottom Line

Resources and support is available.



IUID AIS Strategy

Questions?



IUID AIS Strategy

Resources

uthorities and Guidance - DoD

- U. S. Department of Defense, <u>Annual Report to the Congressional Defense Committees</u>, Status of the Department of Defense's Business Transformation Efforts of 15 Mar 08
- <u>DoD Instruction 8320.04</u>, Item Unique Identification (IUID) Standards for Tangible Personal Property of 24 Jun 08:
 - 5.1. ... "The UII will be used globally as a common key in financial, property accountability, acquisition, supply, maintenance, and logistics systems. UII and type/model/class/series will be the data keys for accountable equipment."

http://www.dtic.mil/whs/directives/corres/pdf/832004p.pdf

- <u>DoD Instruction 4151.19</u>, Serialized Item Management (SIM) for Materiel Maintenance 26 Dec 06:
 - 6.5. "As resources become available, existing maintenance AISs shall be enhanced or modified to support the tenets of SIM programs."

http://www.dtic.mil/whs/directives/corres/pdf/415119p.pdf

<u>BTA IRB Condition</u> - Approval of \$1M or more Development funding, or annual certification for continued permission to develop, requires assessment for possible requirement to implement IUID, via BTA IUID Compliance Checklist

Bottom Line

DoD and BTA have rolled out complete instructions.

Authorities and Guidance - DON

SECNAV INSTRUCTION 4440.34 22 Dec 2009

5(c) References (a) and (c) provide policy and reporting for IUID implementation within legacy Automated Information Systems (AIS) in accordance with (IAW) UII condition requirements of the DoD Weapon System Lifecycle Management/Materiel Supply & Services Management Investment Review Board (IRB) IUID criteria and the Business Enterprise Architecture. In addition, where IRB certification is not required IUID shall be implemented to enhance business processes where return on investment and/or readiness indicate a positive return, and synchronizes with future Navy Enterprise Resource Planning and Global Combat Support System, Marine Corps architectures.

Reference (a)

DoD Instruction 8320.04, Item Unique Identification (IUID) Standards for Tangible Personal Property of 16 Jun 08

Reference (c)

U. S. Department of Defense, Annual Report to the Congressional Defense Committees, Status of the Department of Defense's Business Transformation Efforts of 15 Mar 08

DON Enterprise Architecture Rule (Draft) – Requires use of UII as the unique identifier for items in the business processes (i.e., as primary key); serial number is used as an attribute of an item instead of identifier

DON IUID AIS Strategy

https://acquisition.navy.mil/rda/home/acquisition one source/item unique identification iuid

Bottom Line

DON is near completion with SECNAVINST for IUID.

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DON Implementation initiatives

- Establish Governance Structure
 - Draft charter for DON Life Cycle Item Identification Senior Steering Group (LCII SSG)
 - Chartered DON Life Cycle Item Identification IPT since Sep 07
- Develop Robust Communication Strategy
 - DON IUID Enterprise Training Symposiums (DIETS)
 - DON Life Cycle Item Identification website https://acquisition.navy.mil/rda/home/acquisition one source/item unique identification iuid
 - Some SYSCOMs hold IUID Face-To-Face conferences
- Establish Standardized Processes and Procedures
 - Various SYSCOM pilots to establish most efficient and effective marking and AIS implementation
- Create Marking Strategies That Lessen Engineering Workload
 - Leverage and share lessons learned via Marking Guide
 - Local Engineering Specifications and Local Engineering Processes
- Propagate AIS Support via Strategy
 - DON IUID AIS Implementation Strategy completed
 - Priority support for AISs with IRB's IUID condition
 - Facilitate resources for upgrades of all systems needing IUID
 - Provide DON-owned software modules for AIT enabling and National IUID Registry interface
- Leverage Joint Service Solutions
 - DON using Air Force Enterprise Barcode Service (EBS) contract

Bottom Line

Develop corporate structure to maximize consistency in implementation efforts and minimize cost.

Identifying Systems via BEA

- IRB and DASN (A&LM) is also using the DoD Business Enterprise Architecture Functional Area Management (BEA FAMs) to identify those systems that support the business functions that acquire, store, use, maintain, and dispose of items meeting IUID criteria. In general, this includes systems that support the following BEA business processes:
 - Conduct Program Management (A3.2.8);
 - Manage Receipt and Acceptance (A3.1.2.4);
 - Manage Property and Materiel (A4);
 - Perform Build and Make and Maintenance and Sustainment (A4.3);
 - Deliver Property and Forces (A4.4);
 - Dispose or Return Property and Materiel (A4.5); and
 - Perform Asset Accountability (A4.6)

Bottom Line

System identification coordinated with Enterprise Architecture.



Typical Minimum Business Requirements

Here's a checklist of basic functional requirements. Using the "Easy Ways" and DASNsupplied Tools should allow this upgrade at an efficient cost.

- 1) The system shall be capable of **storing a unique UII** for any item.
- The system shall **maintain the unique association** of the UII with the item in storing data about the item (e.g., a maintenance system must associate the life cycle data to the UII). This includes configuration and shipping processes.
- 3) The system shall **accept the UII from AIT** (such as handheld scanners) if it handles items physically.
- 4) The system shall **update the IUID Registry** with Registry-required item data in automated processes.
- 5) The system shall **validate the system's item data based on the IUID Registry data** in automated processes.
- The system shall use the UII in the **current business processes** which currently use or include unique item identification, for processes concerning all required IUID items.
- 7) The system shall provide the users with the ability to use the UII for all item-unique user functions (add, change, move, delete, and guery, analyze, reports, display).
- 8) The system shall ensure that **interfaces** which transmit item unique information carry the UII with any data about unique items.

"Sample IUID AIS Business Process Requirements," available from DASN (A&LM), provides additional detailed technical requirements implementing these functions. The document also provides required and optional business process re-engineering considerations, policy reference citations, pedigree data fields and citations, and exceptions.

Bottom Line

Defined requirements are the planning starting point.



Three Success Stories

- Large scale ship demonstration (NAVSEA)
 - 12 out of 14 ships complete, covering all ship classes
 - ~1,100 items marked
 - IUID marking conducted as part of normal tag-out process during planned, corrective, and operational maintenance activities
 - Local AISs modified to store UII: SOMS, MRAS, MFOM
 - SYSCOM-wide AIS has issued technical instruction for UII modification: CDMD-OA
- Explosive ordnance device readiness (NAVEOD)
 - 2,500 end items in theater supported
 - Visibility into the complete logistics infrastructure
 - Real time readiness postures 24 x 7
 - Global, metrics-based decision making
 - Continuously reducing repair cost; continuously improving mean time between failures
 - Web-based, globally accessed AIS with UII embedded as search key:
 COLTS
- Medical equipment on hospital ships (BUMED)
 - ~6,000 items marked
 - Funded as part of Serial Number Tracking initiative
 - Local AIS database modified to handle UII
 - DoD-wide AIS currently rolling out IUID capability to all sites:
 Defense Medical Logistics Standard Support (DMLSS)

Bottom Line

Diverse approaches to legacy marking are succeeding; AISs are being modified concurrent with marking effort.

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ce

- P Dept-wide standardized IUID compliance reporting processes established
 - Procurement Performance Management Assessment Program (PPMAP) audit
 - 11 Navy and USMC commands audited over 3 yr period
 - Command-level pre-audit checklists incorporating IUID
 - DON Enterprise-wide Compliance Report*
 - Semi-annual report (Jun & Dec) covering most recent previous quarter
 - 8 HCAs reporting
 - FPDS-NG used to identify random sampling of 15 supply-type contracts per HCA
 - EDA used to validate clause insertion, contract structure, etc.
 - Contracting Officers are requested to identify recalcitrant vendors as part of data call
- Compliance Statistics
 - 2nd Q08: 74%
 - 4th Q08: 87%
 - Four major commands are at 100% compliance; four minor commands identified for further education and training
 - 1st 009: 93%
 - No requests for program-wide exemption were received by March 31, 2009 deadline

* IAW OSD DPAP Memo dtd Dec 08

Bottom Line

Many items entering DON custody now have IUID mark.

- Provide overarching policy and guidance to enable low-cost, opportunistic legacy marking
- Provide infrastructure to support SYSCOM initiatives, re engineering, marking, labels, and quality
- Promulgate standard processes and procedures
- Provide training and communication service-wide at no cost, responding to expressed needs of SYSCOMS
- Maximize leveraging of other Services initiatives and each SYSCOM's experience
- Handle higher-level AIS/ERP issues at enterprise DON-level